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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,321	10/09/2003	Lane D. Lemons	WG0052 H	8300

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EXAMINER	
HUNTER, ALVIN A	
ART UNIT	**PAPER NUMBER**
3711	

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	**Application No.** 10/682,321	**Applicant(s)** LEMONS ET AL.	
	Examiner Alvin A. Hunter	**Art Unit** 3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,13-19,36 and 37* is/are pending in the application.

4a) Of the above claim(s) *20-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,13-19,36 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 1-10, 13-19, 36 and 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not disclose the material for the mantle layer being non bi-modal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-3, 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 6057403) in view of Farrally et al. (Science and Golf III) and Chen (USPN 6562906).

Regarding claim 1, Sullivan et al. discloses a golf ball having a core **50** comprising a butadiene, a mantle **52** comprising an ionomer, and a cover having an inner cover **54** and an outer cover **56** wherein the inner cover comprises a blend of ionomers, and the outer cover comprises a thermoplastic polyurethane. Sullivan et al. does not disclose the particular amount used for the core or the type of ionomer used for the mantle layer. Farrally et al. discloses that a typical core composition comprises a high-cis polybutadiene, 3-40 parts by weight of 40 parts by weight of a metal oxide activator, 15-40 parts by weight of a co-crosslinking agent comprised primarily of a zinc salt of an unsaturated acrylate, and 0.5 to 5 parts by weight of a free radical initiator (See Table 51.4 on page 41 1). One having ordinary skill in the art would have found it obvious to use any amount within the above core composition, as taught by Farrally et al., because it is commonly known within the art to use such amounts. Chen discloses an ionomer resin useful in golf ball covers and intermediate layers wherein the composition comprises an ionomer terpolymer having 2 to 30% acid and up to 35% of a softening comonomer and the copolymer 40% to 100% neutralized (See Summary of the Invention and Column 4, lines 1 through 7). Based on the above the ethylene component must be within the range of 35 to 98%. Chen also discloses that the softening comonomer may be an alkyl acrylate wherein the alkyl acrylate and notes that the acid copolymers include ethylene/acrylic acid/n-butyl acrylate (See Columns 3 and 4). Furthermore, it should be noted that the mantle layer disclosed by Sullivan et al. is a form of covering being that it covers and encloses the core; therefore, one having ordinary skill in the art would have found it obvious to employ any amount of the composition of Chen into the mantle layer of Sullivan et al., in order to improve the resilience of the golf ball.

Regarding claim 2, Sullivan et al. disclose the core having a diameter of 0.5 to 1.25 inches (See Column 32, lines 1 through 14).

Regarding claim 3, Farrally et al. notes that the higher the cis, the higher the COR and also notes that the cis is dependent on the type of catalyst used for the rubber (See Table 51.5 and Page 412). One having ordinary skill in the art would have found it obvious to have the polybutadiene of any cis, as taught by Farrally et al., in order to obtain the COR desired for the golf ball.

Regarding claim 6, Chen discloses the metal ion being magnesium (See Column 3, lines 28 through 36).

Regarding claim 7, Sullivan et al. discloses the inner cover having a Shore D hardness of 65 or more, wherein he notes the inner cover may be as high as 70 and having a thickness of 0.03 to 0.07 inch (See Paragraph bridging Columns 8 and 9 and Column 5, lines 50 through 55).

Regarding claim 8, Sullivan et al. disclose the outer cover having a thickness of 0.03 to 0.06 inch and a Shore D hardness of 55 or less. Applicant claims an outer cover having a Shore D hardness of 56 to 62 but does not disclose why a Shore D hardness of less than 56 would not produce the claimed invention. Furthermore, the applicant is only concerned with the Shore D hardness being greater than 53 (See Paragraph 0016 of Applicant's Specification). One having ordinary skill in the art would have drawn from the Sullivan et al. that the hardness is obvious. The outer cover layer would perform equally as well at a Shore D of 55 as that of the applicant because it increases the spin and feel of the golf ball.

Regarding claim 9, Sullivan et al. does not explicitly disclose the specific gravities of each layer. Though not explicitly disclosing the specific gravities of each layer, one skilled in the art would drawn from Sullivan et al. that the specific gravity of each layer may be of any value. Sullivan et al. notes that each of the layers may contain additives such as fillers, etc. Fillers are additives which are known for adjusting the specific gravity of golf ball layers. One having ordinary skill in the art would have found it obvious to have the specific gravity of any amount so long as the goals set forth by Sullivan et al. are attained.

Regarding claim 10, Sullivan et al. discloses fillers added to the golf ball wherein the filler are from the group of titanium dioxide, zinc oxide, and barium sulfate (See Column 19, lines 48 through 64: and Column 27, lines 60 through Column 28, line 5).

2. Claims 1, 2, 4, 5, 7, 8, 10, 13-16, 18, 19, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melvin et al. (USPN 5779562) in view of Chen (USPN 6562906)

Regarding claims 1, 2, 4, 5, 7, 8, 10, and 13-16, Melvin et al. discloses a golf balls having a center layer comprised of a diene rubber having a diameter of 10 to 35mm, or 0.39 to 1.38 inches, a middle layer comprising a thermoplastic material having a thickness of 2.5 to 10mm, or 0.1 to 0.4 inches and having a Shore C hardness of 30 to 90, or Shore D 15 to 60, an inner cover layer comprised of a blend of ionomers, having a Shore D hardness of greater than 60, and an outer cover layer comprised of a thermoplastic polyurethane and having a Shore D hardness of 55 or less and a thickness of 0.01 to 0.10 inch (See Figure 1, Column 5, lines 10 through 51; Column 9, lines 20 through 47; Column 12, lines 30 through 59; Column 14, lines 19 through 26 and Paragraph bridging columns 14 and 15; and Column 18, lines 34 through 42).

Melvin et al. does not explicitly disclose the compression of the center layer. Melvin et al. discloses the composition of the center layer being a high cis polybutadiene, 17 to 23 parts of a co- crosslinking agent, 2 to 30 parts of a metal activator, and 0.1 to 10.0 parts of a free radical initiator (See Column s 5 through 7). Melvin et al. considers the amounts within the above range being typical amounts. Being that Melvin et al. anticipates the amounts of that of the applicants at points, one having ordinary skill in the art would have drawn therefrom that the center layer of Melvin et al. inherently meets the deflection range of that claimed by the applicant; therefore, one having ordinary skill in the art would have found it obvious to have any of the above amounts for the center layer, as taught by Melvin et al., in order to improve the COR, compression, and hardness of the core. Melvin et al. does not disclose the ionomer terpolymer being neutralized 100% by magnesium. Chen discloses an ionomer resin useful in golf ball covers and intermediate layers wherein the composition comprises an ionomer terpolymer having 2 to 30% acid and up to 35% of a softening comonomer and the copolymer 40% to 100% neutralized (See Summary of the Invention and Column 4, lines 1 through 7). Based on the above the ethylene component must be within the range of 35 to 98%. Chen also discloses that the softening comonomer may be an alkyl acrylate wherein the alkyl acrylate and notes that the acid copolymers include ethylene/acrylic acid/n-butyl acrylate (See Columns 3 and 4). One having ordinary skill in the art would have found it obvious to neutralized the ionomer 100% with magnesium, as taught by Chen, in order to improve the resilience of the golf ball.

Regarding claim 19, Melvin et al. comprises filler selected from the group of zinc oxide, barium sulfate, titanium dioxide. Furthermore, all of the above fillers are generally known within the art to be pigments used for cover layers.

Regarding claims 9, 18, 36, and 37, Melvin et al. does not explicitly disclose the specific gravities of each layer. Though not explicitly disclosing the specific gravities of each layer, one skilled in the art would drawn from Melvin et al. that the specific gravity of each layer may be of any value. Melvin et al. notes that each of the layers may contain additives such as fillers, etc. Fillers are additives which are known for adjusting the specific gravity of golf ball layers. One having ordinary skill in the art would have found it obvious to have the specific gravity of any amount so long as the goals set forth by Melvin et al. are attained.

3. Claims 3 and 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Melvin et al. in view of Chen (USPN 6562906) further in view of Farrally et al. (Science and Golf III).

Regarding claims 3 and 17, Melvin in view of Hagman does not disclose the cis content of the polybutadiene. Farrally et al. notes that the higher the cis, the higher the COR and also notes that the cis is dependent on the type of catalyst used for the rubber (See Table 51.5 and Page 412). One having ordinary skill in the art would have found it obvious to have the polybutadiene of any cis, as taught by Farrally et al., in order to obtain the COR desired for the golf ball.

Response to Arguments

Applicant's arguments filed 4/14/06 have been fully considered but they are not persuasive. Applicant argues that Chen does not teach a non-bimodal ionomer terpolymer neutralized at 100%. Although the examiner agrees that this is not taught, the applicant has not support within the specification showing that the mantle layer is non bimodal. Applicant is urged to show through a 37 CFR 1.132 declaration that this is present within the specification. Until shown, the rejection from the previous office action has been furnished above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sullivan et al. (USPN 5891973) discloses a ionomer in which is neutralized 100% that may also include a comonomer added thereto.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Kim, can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AAH
Alvin A. Hunter, Jr.

EUGENE KIM
SUPERVISORY PATENT EXAMINER